

Department of Energy

2009 EStar Awards



OFFICE OF ENVIRONMENTAL MANAGEMENT

East Tennessee Technology Park (ETTP)

Information Technology (IT) Organization Pollution Prevention and Waste Minimization Projects

The Bechtel Jacobs Company IT Organization created new virtual servers and replaced CRT monitors with energy-efficient LCD monitors resulting in significantly decreased energy use, savings of nearly a half million dollars, and increased employee environmental stewardship awareness.

OFFICE OF LEGACY MANAGEMENT

Fernald Preserve **Fernald Preserve Visitor Center**

The U.S. Green Building Council awarded the Fernald Preserve Visitors Center platinum level certification through its Leadership in Energy and Environmental Design (LEED) program. Fernald incorporated the frame of an existing Silos Project warehouse and adopted many sustainable design, energy, and water conservation features to win the platinum designation.

OFFICE OF SCIENCE

Pacific Northwest National Laboratory (PNNL) **Desert Green: PNNL "LEEDing" with its First Opportunity**

PNNL facilities and operations personnel incorporated sustainable design principles into policies and procedures for new construction at the Capability Replacement Laboratory. In addition to tracking to the Leadership in Energy and Environmental Design (LEED) silver certification, the energy performance is modeled at 25-30% better than the ASHRAE 90.1 baseline design.

NATIONAL NUCLEAR SECURITY ADMINISTRATION

Los Alamos National Laboratory (LANL) **Using a Mature EMS for Meaningful Institutional Improvements**

Under the LANL Environmental Management System (EMS), each of the site's operating directorates develops an annual environmental action plan to identify and correct local environmental issues. This resulted in over 450 individual improvement actions involving compliance performance, reduced liquid discharge, energy and fuel conservation, and excess materials disposition. Significant progress has been made in addressing site issues thereby gaining further support of and commitment to the EMS process.

Sandia National Laboratories - New Mexico **Pollution Prevention Measures Implemented in D&D Projects**

The SNL/New Mexico Demolition and Destruction program successfully institutionalized pollution prevention techniques, such as materials characterization, reuse, and recycling, to significantly minimize the quantity of solid waste landfilled and hazardous/radioactive materials generated.



Y-12 National Security Complex **Y-12's "Go Green" Transportation Movement Just Keeps Going, Growing, and Greening**

Y-12's Go Green Transportation Movement moved beyond the use of alternative fuels to include other fleet management techniques, such as mass transit and options for bikers and pedestrians, to reduce the impact of employee commuting and campus navigation.



Y-12 National Security Complex **Y-12 Manufacturing Makes High-Tech P2 Look Easy**

The Y-12 National Security Complex manufacturing organization's pollution prevention programs included elimination of Freon for chip cleaning, development of a tackless residue cleaning cloth, and reuse of surplus materials. More than 275,600 kg of waste were eliminated resulting in a cost avoidance of \$542,000.



Y-12 National Security Complex **Unneeded Materials and Chemicals (UMC) Reuse Efforts Right on Track**

The Y-12 National Security Complex identified several historical railroad items that, instead of being disposed, could be donated to the Southern Appalachia Railway System for future generations to enjoy. This donation also avoided generating 42,000 kg of industrial waste, saved over \$40,000, and preserved many historical artifacts.

OFFICE OF SCIENCE

Brookhaven National Laboratory (BNL) **Total Nitrogen Reduction at BNL Sewage Treatment Plant**

The BNL sewage treatment plant loading had become unbalanced due to the changes in BNL's mission. By simply adding the cafeteria's putrescible kitchen waste to the waste stream, the nutrient balance at the plant was restored and treatment efficiency significantly improved.



OFFICE OF ENVIRONMENTAL MANAGEMENT

Savannah River Site (SRS) **SRS Deploys New Gasket Removal and Replacement Tool**

The Savannah River National Laboratory's Remote Systems Engineering group developed and deployed a new tool at the Defense Waste Processing Facility used to remotely remove and replace damaged gaskets and snap rings in Hanford-type connectors. Annual cost savings will exceed \$220,000, excluding labor and productivity efficiencies.



Savannah River Site **SRS Bio-Mass Steam Plant Team**

SRS replaced an old coal-fired steam plant with a new, highly efficient steam plant that primarily burns wood as a clean, renewable source of biomass fuel. The conversion is expected to annually reduce pollutant emissions by more than 2,300 tons and save \$1.5 million.

